

“Clinical Study on Management of Retained Placenta of Admitted Cases in Dhaka Medical College Hospital, Dhaka, Bangladesh”

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Abstract:

Introduction: Retained placenta remains a potentially life-threatening condition because of the associated hemorrhage and infection to its removal. The incidence of retained placenta varies greatly around the world, affecting between 0.1 and 33% of vaginal deliveries depending on the population studied. In spite of many developments in the field of obstetrics, retained placenta primarily be responsible for maternal deaths globally as it is associated with a high case fatality rate. **Objective:** To assess the management of patients presenting with retained placenta. **Material & Methods:** This was a cross-sectional study. This study carried out in the department of Obstetrics and Gynaecology, Dhaka Medical College Hospital (DMCH), Dhaka, Bangladesh. During the study period from January 2010-June 2010. A total number of 50 cases were selected for the study. The data was collected by pre-designed questionnaire; relevant information was collected by direct interview of patients and relatives. Statistical analyses were carried out by using the Statistical Package for Social Sciences version 16.0 for Windows (SPSS). The mean values were calculated for continuous variables. The quantitative observations were analyzed by frequencies and percentages. The research protocol is approved by the committee (Local Ethical Committee). **Results:** Most of the patients with retained placenta were in 3rd decade. Majority (80.0%) of the patients were housewife. More than a half (54.0%) of the patients earn >6000 Tk. Nearly two third (62.0%) of the patients had primary education level, 8.0% was illiterate and 22.0% were SSC level. Home delivery was found in 31(62.0%). Mean H/O retained placenta was found 3.0±0.58 hours. Moderate P/V bleeding was 42 (84.0%) and severe P/V bleeding was 4(8.0%). Myomectomy was found 2.0% cesarean section 6.0%, H/O MR 48.0% and D&C was in 36.0%. Primi para was found 4.0% and multi para was 96.0%. Moderate and severe anaemia were found 82.0% and 10% respectively. Atonicity of uterus was in 58.0%, tenderness 4.0, more than three fourth (76.0%) was with full urinary bladder, mean height uterus was 22.24±1.6 weeks. Moderate per vaginal bleeding was in 84.0% and severe in 6.0%, vaginal full with clot 82.0% and OS open in 92.0%. Retained placenta with PPH with shock was in 52.0%, retained placenta with PPH without shock was 40.0% and retained placenta without PPH was 8.0%. all patients received antibiotics, 94.0% patients needed blood transfusion, manual removal was 47(94.0%), deep sedation given in 24(48.0%), analgesia given in 6(12.0%) and anesthesia given in 23(46.0%). Hysterectomy was done in 1(2.0%). Postpartum hemorrhage was found in 14(28.0%) and inversion was 1(2.0%). Balloon catheter was done in 22.0%, prostaglandins tab was given to 28.0% and oxytocin injection received in 28.0%. **Conclusion:** Retained placenta still remains a potentially life threatening condition in the tropics due to the associated hemorrhage, and other complications related to its removal

Key Words: Management, Hemorrhage, Retained Placenta

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I. Introduction

Retained placenta is one of the most important causes of postpartum hemorrhage in Bangladesh as it is worldwide and a common problem faced by the department of obstetrics. The placenta is said to be retained when it is not expelled out of even in 30 minutes after birth of the baby¹. Fifty-Six percent of pregnant mothers accept one antenatal checkup, 92% of deliveries take place at home and only 14% deliveries are attended by trained personnel². Around three Bangladeshi women die each hour of complications related to pregnancy and child birth. The Bangladesh Maternal Mortality Survey 2001 indicates a maternal mortality rate of 320 deaths per 100,000 live births in the period 1998 to 2001³. The commonest single preventable cause is postpartum hemorrhage which is responsible for 26% maternal death in Bangladesh. Retained placental tissue and

membranes causes 5-10% of postpartum in hemorrhage⁴. In developing countries, it is responsible for an annual mortality of approximately 150,000 women per year.⁵ Retained placenta is potentially life threatening not only because of associated hemorrhage and infection as well as complications related to its removal. The interrelated consequences and aftermath if such problem includes morbidity and mortality. Though there are few number of studies touched upon retained placenta in Bangladesh but findings from international studies and clinical research show that appropriate and adequate management during emergency can combat effectively and long term complications. People with lower socio-economic class do not have easy accessibility, affordability and availability of emergency maternity care. Diagnosis of retained placenta¹ Whether the placenta is retained with prior separation or not, is evidenced by the presence or absence of the features of placental separation. The hour glass contraction or the nature of adherent placenta, simple or morbid, can only be diagnosed during manual removal. The ultrasonography may be helpful to make the diagnosis. The present study attempts to show the management of the patients who will be admitted with retained placenta at Dhaka Medical College Hospital. It is assumed that if timely appropriate measures can be taken, maternal mortality due to retained placenta can be reduced to a great extent can offer better quality of life. The study will be beneficial for further research and policy making.

Objectives

a) General objective:

- To assess the management of patients presenting with retained placenta.

b) Specific Objectives:

- To determine the clinical presentation of these cases.
- To detect the outcome of the management of these cases with retain placenta.

II. Methodology And Materials

This was a cross-sectional study. This study carried out in the department of Obstetrics and Gynaecology, Dhaka Medical College Hospital (DMCH), Dhaka, Bangladesh. During the study period from January 2010-June 2010. A total number of 50 cases were selected for the study. The data was collected by pre-designed questionnaire; relevant information was collected by direct interview of patients and relatives. Statistical analyses were carried out by using the Statistical Package for Social Sciences version 16.0 for Windows (SPSS). The mean values were calculated for continuous variables. The quantitative observations were analyzed by frequencies and percentages. The research protocol is approved by the committee (Local Ethical Committee). The aims and objective of the study along with its procedure, risk and benefits was explained to the patients with easily understandable local language and then informed consent was taken from each patient. It was assured that all records were kept confidential and the procedure was helpful for both the physician and patients in making rational approach regarding management of the case.

• Inclusion Criteria

- Patients who presented with retained placenta in Dhaka Medical College Hospital (DMCH).

• Exclusion Criteria

- Patients who refused to give consent
- Patients developed retained placenta at Dhaka Medical College Hospital (DMCH)

III. Results

Table I: shows a total of 50 patients were included in this study, maximum 28(56.0%) patients age belonged to 26-30 years and mean age was found 27.04 ± 3.48 years with range from 20 to 36 years. Table II: shows the occupation status of our patients, maximum patients 42(84.00%) were housewife followed by (8.00%) patients were Service, both business and others were (4.00%). Table III: shows the socio economic status of our patients, maximum patients 27(54.00%) were earn >6000tk followed by 22(44.00%) patients were earning 3000-6000tk and <3000 were 1(2.00%). Table IV: shows regarding the educational status, majority 31(62.0%) patients were from primary education level. Table V: shows chief complaints of the study patients; home delivery was found in 31(62.0%). Mean duration of retained placenta was found 3.0 ± 0.58 hrs with range from 2.30 to 4.3hrs. Mild per vaginal bleeding was found 4(8.0%), Moderate P/V bleeding was 42(84.0%) and severe bleeding was 4(8.0). Table VI: shows regarding past history, patients with myomectomy was found 1(2.0%), cesarean was 3(6.0%). H/O retained placenta was 9(18.0%). H/O MR was 24(48.0%) and D&C was 18(36.0%). Figure I: Shows the regarding the para of the study patients, primi para was found 2(4.0%) and multi para was 48(96.0) Table VII: shows the general examination of the study patients, moderate anaemia was found 41(82.0), normal temperature was 49(98.0%), mean pulse was 91.0 ± 8.13 beats/min mean systolic BP was found 91.9 ± 6.81 mmHg and mean diastolic BP was 57.6 ± 5.55 mmHg. Table VIII: shows regarding P/A examination of the study patients, atonic uterus was 29(58.0%), tenderness was 2(4.0%), more than three fourth 76% was with full urinary bladder, mean height of uterus was 22.24 ± 1.6 weeks. Table IX: shows the per vaginal examination

of study patients, moderate per vaginal bleeding was 41(82.0%), vaginal full with clot was 41(82.0%) and OS was open in 46(92.0%). Table X: shows mean Hb% was found 8.25 ± 0.85 gm/dl with range from 7 to 9.2gm/dl Figure II: shows the regarding the diagnosis of the study patients, retained placenta with PPH shock was 26(52.0%), retained placenta with PPH without shock was 20(40.0%) and retained placenta without PPH was 4(8.0%). Table XI: shows all patients were managed with antibiotics, among them injection ciprofloxacin and injection metronidazole was 38(76.0). 47(94.0%)with blood transfusion, oxytocin with 49(98.0), prostaglandin given to 48(96.0%) and controlled cord traction was done in 3(6.0%). Table XII: shows regarding the surgical management of the study patients, manual removal was done in 47(94.0%), deep sedation was given in 24(48.0%), analgesia was given in 6(12.0) and anesthesia was given to 23(46.0%). Hysterectomy was 1(2.0%) due to uncontrolled PPH. Figure III: Bar diagram showing the management of complications of the study patients Balloon catheter was given to 11(22.0), prostaglandins tab was given to 14(28.0%) and oxytocin inj. Was given to 14(28.0%).

Table I: Age distribution of the study patients (n=50)

| Age (in years) | Numbers of patients | Percentage |
|-----------------|---------------------|------------------|
| 20-25 | 16 | 32.0 |
| 26-30 | 28 | 56.0 |
| >30 | 6 | 12.0 |
| Mean \pm SD | | 27.04 \pm 3.48 |
| Range (min-max) | | (20-36) |

Table II: Occupational status of the study patients (n=50)

| Occupational status | Numbers of patients | Percentage |
|---------------------|---------------------|------------|
| Housewife | 42 | 84.0 |
| Service | 4 | 8.0 |
| Business | 2 | 4.0 |
| Others | 2 | 4.0 |

Table III: Distribution of the study patients according to socio economic status (n=50)

| Socio economic status | Number of patients | Percentage |
|-----------------------|--------------------|------------|
| <3000tk | 1 | 2.0 |
| 3000-6000 | 22 | 44.0 |
| >6000 | 27 | 54.0 |

Table IV: Distribution of the study patients according to educational status(n=50)

| Educational status | Number of patients | Percentage |
|--------------------|--------------------|------------|
| Illiterate | 4 | 8.0 |
| Primary | 31 | 62.0 |
| SSC/HSC | 11 | 22.0 |
| Graduate/Masters | 4 | 8.0 |

Table V: Distribution of the study patients according to chief complaints (n=50)

| Chief complaints | Number of patients | Percentage |
|--|--------------------|------------|
| History of delivery | | |
| • Home | 31 | 62.0 |
| • Hospital (from outside) | 9 | 18.0 |
| • Others (clinic) | 10 | 20.0 |
| Duration of retained placenta(hrs.) | | |
| • Mean \pm SD | 3.0 \pm 0.58 | |
| • Range (min-max) | (2.30-4.3) | |
| P/V bleeding | | |
| • Mild | 4 | 8.0 |
| • Moderate | 42 | 84.0 |
| • severe | 4 | 8.0 |

Table VI: Distribution of the study patients according to past history (n=50)

| History of the pat history | Number of the patients | Percentage |
|----------------------------|------------------------|------------|
| Surgery on uterus | | |
| Myomectomy | 1 | 2.0 |
| Cesarean section | 3 | 6.0 |
| No | 46 | 92.0 |
| Retained placenta | | |
| • Yes | 9 | 18.0 |
| • No | 41 | 82.0 |

| | | |
|-------------------|----|------|
| MR/D&C | | |
| • MR | 24 | 48.0 |
| • D&C | 18 | 36.0 |
| • No | 8 | 16.0 |
| Parity | | |
| • Primi | 2 | 4 |
| • Multi | 48 | 96 |

Table VII: Distribution of the study patients according to general examination (n=50)

| General examination | Number of patients | Percentage |
|------------------------------|--------------------|------------|
| Anaemia | | |
| • Mild | 4 | 8.0 |
| • Moderate | 41 | 82.0 |
| • Severe | 5 | 10.0 |
| Temp | | |
| • Raised | 1 | 2.0 |
| • Normal | 49 | 98.0 |
| Pulse(beats/min) | | |
| • Mean | 91.6±8.13 | |
| • Range (min-max) | (72-120) | |
| Blood pressure (mmHg) | | |
| • Mean systolic BP | 91.6±6.81 | |
| • Range | (80-110) | |
| • Mean diastolic BP | 57.6±5.55 | |
| • Range | (40-70) | |

Table VIII: Distribution of the study patients according to the P/A examination (n=50)

| P/A examination | Number of patients | Percentage |
|--------------------------|--------------------|------------|
| Feeling of uterus | | |
| • Soft | 29 | 58.0 |
| • Firm | 21 | 42.0 |
| Tenderness | | |
| • Yes | 2 | 4.0 |
| • No | 48 | 96.0 |
| Urinary bladder | | |
| • Full | 38 | 76.0 |
| • Empty | 12 | 24.0 |
| Height uterus | | |
| • Mean (weeks) | 22.24±1.6 | |
| • Range (min-max) | (20-24) | |

Table IX: Distribution of the study patients according to P/V examination (n=50)

| P/V examination | Number of patients | Percentage |
|-----------------------------|--------------------|------------|
| Per vaginal bleeding | | |
| • Mild | 5 | 10.0 |
| • Moderate | 41 | 82.0 |
| • Severe | 3 | 6.0 |
| Vagina | | |
| • Full with clot | 41 | 82.0 |
| • Empty | 7 | 14.0 |
| • Tear | 2 | 4.0 |
| OS | | |
| • Open | 46 | 92.0 |
| • Close | 4 | 8.0 |

Table X: Distribution of the study patients according to investigation (n=50)

| Investigation | Number of patients | Percentage |
|--------------------|--------------------|------------|
| Hb% (gm/dl) | | |
| • Mean ± SD | | 8.25±0.85 |
| • Range (min-max) | | (7-9.2) |

Figure II: Bar diagram showing the diagnosis of the study patients. (n=50)

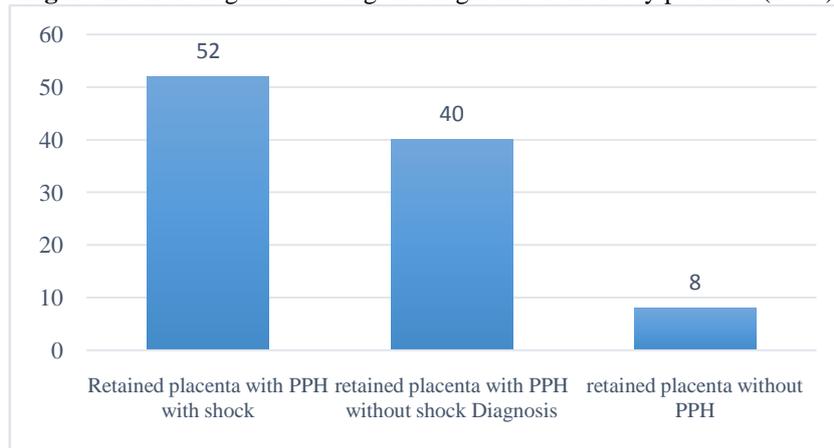


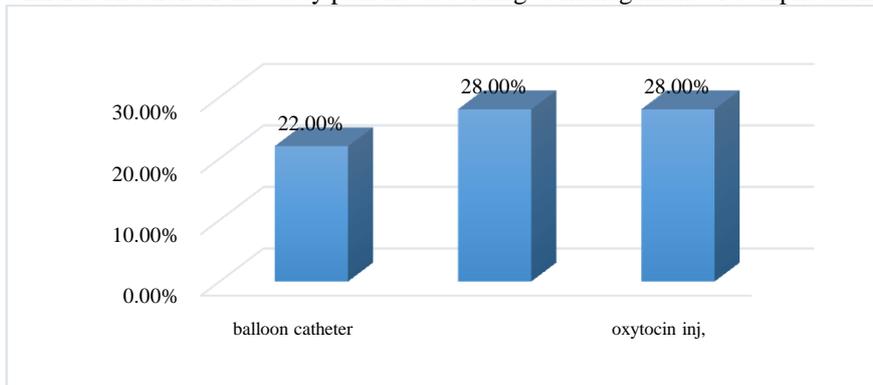
Table XI: Distribution of the study patients according to general management (n=50)

| General management | Number of patients | Percentage |
|---|--------------------|------------|
| Antibiotics | | |
| • No | 0 | 0.0 |
| • Yes | 50 | 100.0 |
| • Injection, ciprofloxacin, injection metronidazole | 38 | 76.0 |
| • Injection Amoxicillin, Injection metronidazole | 8 | 16.0 |
| • Injection Ceftriaxone, Injection Metronidazole. | 4 | 8.0 |
| Blood transfusion | | |
| • Yes | 47 | 94.0 |
| • No | 3 | 6.0 |
| Oxytocin | | |
| • Yes | 49 | 98.0 |
| • No | 1 | 2.0 |
| Prostaglandin | | |
| • Yes | 48 | 96.0 |
| • No | 2 | 4.0 |
| Controlled cord traction | | |
| • Yes | 3 | 6.0 |
| • No | 47 | 94.0 |

Table XII: Distribution of the study patients according to surgical management (n=50)

| Surgical management | Number of patients | Percentage |
|-----------------------|--------------------|------------|
| Manual removal | | |
| • No | 3 | 6.0 |
| • Yes | 47 | 94.0 |
| • Deep sedation | 24 | 48.0 |
| • Analgesia | 6 | 12.0 |
| • Anesthesia (G/A) | 23 | 46.0 |
| Hysterectomy | | |
| • Yes | | 2.0 |
| • No | | 96.0 |

Figure III: Distribution of the study patients according to management of complication (n=50)



IV. Discussion

This cross-sectional study was carried out with an aim to determine the clinical feature, incidence of retained placenta and to identify appropriate intervention as well as to establish that timely appropriate treatment can reduce the maternal mortality from retained placenta. In this current study it was observed that, a total of 50 patients with retained placenta were included in this study, more than a half (56%) of the patients were in 26-30 years and the mean age was found 27.04 ± 3.48 years ranged from 20 to 36 years, which is consistent with Panpaprai & Boriboonhirunsarn (2007) and Soltan & Khashoggi (1997) studies^{6,7}, where the authors showed the mean age of their patients having retained placenta were 29.3 ± 6.4 years and 28.36 ± 5.9 years respectively. Similarly, Owolabi et al (2008)⁸ and Chhabra & Dhorey (2002)⁹ found that most of their patients with retained placenta were in 3rd decade, which are closely resembled with the current study. Regarding the occupational status, it was observed in this present study that, majority (84.0%) patients was housewife, followed by 8.0% service holder, 4.0% businessman and 4.0% others, which is similar with Bhowmik (2009)¹⁰ showed, where the author and 4.0% others, where the author showed 88.0% housewives, 8.0% industry workers and 4.0% service holders and the above type of dependent persons can not take decisions independently. Therefore, there are treated as vulnerable group and come in late for treatment. In this present study it was observed that, more than a half (54.0%) patients earn >6000Tk, followed by 44.0% earn 3000-6000Tk and 2.0% earn <300Tk. The aforementioned study in Kasturba Hospital, India Chhabra & Dhorey (2002)⁹ shows the risks of retained placenta is potentially life threatening not only because of associated hemorrhage and infection as well as complication related to its removal. These risks are increase in women with poor social status due to pre-existing anemia, malnutrition and unsupervised home deliveries, (Editorial 2002)¹¹. Education is important for awareness building about their health and understanding the situation. There is no available data regarding the education background of the patients having RP in other studies, (Editorial, 2002; weeks, 2001; Makhseed and Moussa, 1995)¹¹⁻¹³. In this study it was observed that, nearly two third (62.0%) of the patients was primary education level, 8.0% illiterate and 22.0% was SSC level. MacLeod and Rhode (1998)¹⁴ found that illiteracy rate was reported only 49.5% had completed primary education. In another study, Owolabi et al. (2008)⁸ showed 11.7% illiterate, 25.0% had completed post-secondary. In this series it was observed that almost two third (62.0%) patients were delivered at home and 18.0% patients were delivered in Hospital. Chhabra and Dhorey (2002)⁹ showed 91.54% women were admitted with retained placenta after home delivery, 8.45% women had hospital deliveries. In our country Bhowmik (2009)¹⁰ observed 82.0% respondents were delivered at home & 18.0% respondents were delivered in Hospital, which are comparable with the current study. History of previous retained placenta increased the chances of having retained placenta by 29-fold in a subsequent birth. It is possible that the risk factors that were responsible for previous retained placenta may persist in subsequent pregnancies. Regarding past history of the patients it was observed in this current series that, myomectomy was found 2.0%, cesarean section 6.0%, H/O retained placenta 18.0%, H/O MR 48.0% and D&C was in 36.0%. It seems that over curettage and infection after MR can be a probable pre-disposing factor of RP. A retrospective study by Beckhuzen et al, (1994)¹⁵ showed that the recurrence of RP was 32, while placenta accrete and a history of multiple RPs appeared to pre-dispose was 32, while placenta accrete and a history of multiple RPs appeared to pre-dispose to recurrence. Another study done by Tanberg et al, (1999)¹⁶ showed that 16.0% had experienced retained placenta before. Chhabra and Dhorey (2002)⁹ showed 14.08% women had retained placenta in the past. Panpaprai and Boriboonhirunsarn (2007)⁶ found previous retained placenta and used of oxytocin were 1.3% and 66.7% respectively. Sultan and Khashoggi (1997)⁷ observed that previous retained placenta in were in 8.2% and previous D&C in 27.4% of their study cases. Induction of labor, pethidine and oxytocin usage has been reported to increase the incidence of retained placenta in previous studies done by Soltan and Khashoggi (1997)⁷, Adelusi et al. (1997)¹⁷, Dombrowski et al. (1995)¹⁸ and Ely et al. (1995)¹⁹. Uterine surgery in the form of caesarean section or D&C are significantly associated with retained placenta. The above findings regarding the predisposing factors are comparable with the current study. The risk of having retained placenta increases with age and parity. Chang et al. (1977)²⁰ reported commoner incidence of retained placenta in grand multi para although they did not state magnitude of this increase. In this series it was observed that, 4.0% patients were primi para and 96.0% patients had multi para. Chhabra and Dhorey (2002)⁹ showed parity ranged between primipara to para 6, but most were second and third para, which is consistent with the current study findings. On the other hand, Soltan & Khashoggi (1997)⁷ and Owolabi et al (2008)⁸ showed 16.4% and 25.8% patients were in grand multipara. Regarding the od P/A examination of the study patients it was observed in the study that atonic uterus was in 58.0%, more than three fourth (76.0%) was with full urinary bladder, mean height of uterus was 22.24 ± 1.6 weeks. About the per vaginal examination in this present series it was observed that moderate per vaginal bleeding was in 85.0%, vaginal full with clot was in 82.0% and OS was open in 92.0%. In Das (2004)²² study showed the dilatations of the cervical during paravaginal examination, 92.0% cases were open and in 8.0% cases closed. Time interval between delivery and removal of placenta in an important factor. As time passes by, the chances of closure of their will be more and thus manual removal of placenta will be more difficult. In this current study it was observed that the mean Hb% was found 8.25 ± 0.85

gm/dl with range to 7 to 9.2 gm/dl. In another study Chhabra and M.Dhorey (2002)⁹ showed only 8.4% had hemorrhage of 11gm/dl and above. Regarding the diagnosis, it was observed in this present study that retained placenta with PPH without shock was 40.0% and retained placenta without PPH was 8.0%. Therefore, retained placenta not only causes hemorrhage shock it can also cause shock merely by its presence. In the study of Chhabra et al, (2002)⁹ showed 36.61% women had come in state of severe shock. In this current series it was observed that all patients received antibiotics, among them injection ciprofloxacin injection metronidazole received 76.0%, blood transfusion received 94.0%, oxytocin 98.0%, prostaglandin 96.0% and controlled cord traction was done in 6.0%. It was observed in this current study that, 94.0% of the patients need manual removal of placenta, deep sedation was given to 48.0%, analgesia was given to 12.0% and anesthesia was given to 46.0% and 2.0% underwent hysterectomy. None of the cases of RP was removed with the use of spinal analgesia. Ideally manual removal of placenta is done under general anesthesia but in case of emergency where anesthesia facilities are limited it can be also done under deep sedation and analgesics. The previously mentioned study in Kasturba Hospital, India by Chhabra et al, (2002)⁹ showed a number of thirty-six (50.7%) women required general anesthesia for manual removal. Another study by A Tandberg et al, (1999)¹⁶ showed that the use of general anesthesia for manual removal of placenta decreased from 74% in 1990 to 19% in 1994 due to increased use of spinal analgesia. Another study by A Tandberg et al. (1999)¹⁶ showed that out of total of 24,750 deliveries registered during the five-year study period, placenta was removed manually in 165 women (0.6%). Another study showed that manual removal of placenta was needed in 81.25% (Hyder,1995) which is inconsistent with Tandberg et al. (1999)¹⁶ study where the authors obtained 1.8% developed inversion. In the current study it is observed that balloon catheter was done in 22.0%, prostaglandins tab was given in 28.0% and oxytocin injection received in 28.0% of the patients.

Limitations Of The Study

Since this a hospital based study, the incidence does not reflect the actual incidence of the community. The study sample size was also small, it is not found to be statistically significant and no control was taken.

V. Conclusion And Recommendations

Retained placenta occurs in majority women having home delivery. The risk factors for retained placenta include previous history of D&C and MR, previous history of placenta retention and uterine surgery. The incidence and severity may be decreased by provision of infrastructures and improved social amenities, health education and women empowerment coupled with essential obstetrics services by highly skilled health care providers in ensuring a properly conducted delivery with active management of the third stage of labour. The recommendation to wait for a minimum of 2 hours before making any attempt at manual removal of the placenta. Once blood transfusion and antibiotics become readily available, manual removal of the placenta suggested within 15-20 minutes after the completion of the second stage of labor. Pregnant women with such risk factors should be counseled regarding the risk of a retained placenta. In addition, the presence of these risk factors antenatally should alert obstetrics to be aware of condition and its major consequence of postpartum hemorrhage and that they should be prepared to avoid serious morbidity and mortality. A further prospective study should be conducted to verify these results and identify other risk factors associated with retained placenta.

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